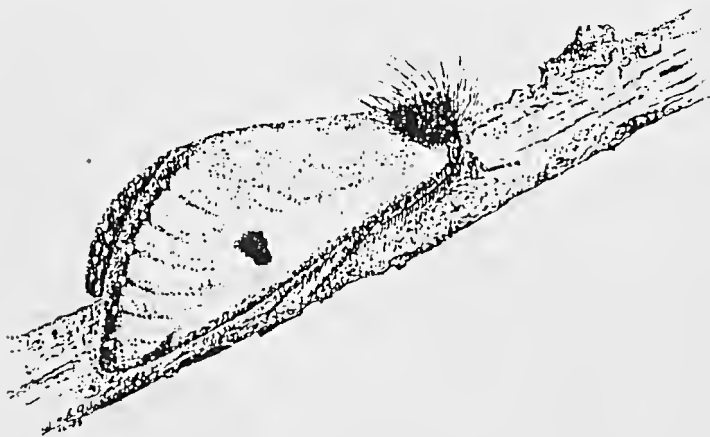


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DIARY OF COMING EVENTS

21 June	- Annual General Meeting
19 July	- Council Meeting
16 August	- General Meeting
	"Reduced use of synthetic insecticide control of cabbage white butterfly and diamond back moth" by N. Endersby
20 September	- Council Meeting
18 October	- General Meeting

Scientific names contained in this document are *not* intended for permanent scientific record, and are not published for the purposes of nomenclature within the meaning of the *International Code of Zoological Nomenclature*, Article 8(b). Contributions are not refereed, and authors alone are responsible for the views expressed.

MINUTES OF THE GENERAL MEETING 19 APRIL 1991

The President, M Hunting, opened the meeting at 8 p.m..

Apologies: R Field

Present: J Burns, P Carwardine, M & P Coupar, D Crosby, I Endersby, I Faithfull, A & E Farnworth, B Hunting, D & J Holmes, P Hutchinson, P Kelly, G Krake, M Malipatil, S McKechnie, T Morton, T New, J Ross, R Vagi, B Vardy, J Wainer, K Walker, J Wertz.

Minutes of the February meeting (*Victorian Entomologist* 21: 41-42) were passed (Kelly/Crosby).

The Secretary then introduced Dr Steve McKechnie of Monash University to talk on "Genetic Variation in Californian checkerspot butterflies". Steve described his work, undertaken while based at Stanford University, on the biology and genetics of two species of *Euphydryas*, *E. editha* and *E. chalcedona*, and indicated how genetic variation may be studied and interpreted. After questions and discussions, a vote of thank was proposed by the President.

Correspondence: Detailed and received (Walker/Crosby).

Treasurer's Report: D Crosby reported credit balances of \$3407.69 (general account), \$1941.10 (Le Souef Memorial Award Account) and \$462.22 (Junior Encouragement Fund). Membership is at an all time high level, with 138 (Country 69, Metropolitan 47, Student 6, Life 2, Associate 7, Subscription only 7). Some members are still unfinancial for 1991. Received (Crosby/D Holmes).

Editor's Report: Deferred.

Excursion's Report: P Carwardine thanked Ian Faithfull for his efforts in preparing the report of the last field excursion.

T New informed the meeting that Society members will be welcome to participate in a cocktail party at the Museum, which is being arranged as part of the Australian Entomological Society meeting on July 15. Charles McCubbin is expected to talk to that gathering.

General Business:

- i) D Crosby:
 - a) Reminder to members to provide details of unusual records of occurrence and abundance for this season.
 - b) Reminder that the next meeting is the Annual General Meeting.
 - c) Drew members' attention to the recent controversial listing of *Acrodipsas illidgei* as 'Permanently Protected Fauna' in Queensland. T New enlarged on some ramifications of this.
- ii) R Vagi: A case of butterflies from several localities near Melbourne.

- iii) I Faithfull:
 - a) Larvae of the common soldier beetle, common in pastures in southern Victoria. The adults form immense aggregations on vegetation.
 - b) Several other beetles.
 - c) A *Dolomedes* spider, associated with water, and found carrying a large egg-sac which had subsequently hatched.
- iv) P Carwardine: The new Insect Stamps issued by Australia Post, with first-day covers with the two special postmarks issued for these, and accompanying cards of the insects.
- v) D Holmes: Reported a recent visit by Ray and Nola Manskie, who send their regards to the Society. A recent sighting of *Cressida* near the Melbourne Zoo - a possible escapee from the Bullerly House?
- vi) K Walker: Conveyed thanks to the Society for help in organising the 'Skydancers' exhibition at the Museum, which is receiving extensive favourable publicity and large attendances. He distributed the information leaflet on the exhibition, which may now run for a year.
- vii) The Secretary asked for expressions of interest in serving as Officer's or Council Members in the Society to be sent to him before the next Council Meeting.

The Meeting finished at 9.45 p.m.

MINUTES OF COUNCIL MEETING, 17 MAY 1991

The President, M Hunting, opened the meeting at 8 p.m.

Present: J Burns, P Carwardine, K Dunn, I Faithfull, P Kelly, M Malipatil, J Ross and K Walker.

Apologies: D Crosby, R Field, T New.

Minutes: Minutes of the March Council Meeting (*Vic. Ent.* 21: 42-43) were passed. (Ross/Burns).

Correspondence: Detailed and received. (Walker/Ross)
Letter from M.U.P. re enclosure in next issue of *Vic. Ent.* to be answered by K. Dunn. Charge to be \$25.00. (Malipatil/Burns).

Treasurer's Report: Financial Statement as at 13 May 1991 was received from D Crosby as follows:

General Account	\$3,460.70
(Charges for <i>Vic. Ent.</i> still not paid)	
Le Souef Award Account	\$1,941.10
Junior Encouragement Fund	\$ 462.22

Membership:	Full	128
	Associate	7
	Subscribers	7
	Unpaid for '91	18
Received (Walker/Burns)		

Editor's Report: K Dunn reported that material was in hand for the next issue of Vic. Ent.. A new editor will be required and M Malpatil will enquire re the facilities at P.R.I.

Excursions: An excursion to Braeside Metropolitan Park was suggested. P Carwardine to enquire.

General Business: 1. Speaker for August meeting: Nancy Endersby was suggested; M. Malpatil to contact.

2. I Faithfull expressed concern regarding the accuracy of the financial statement as published in Vic. Ent. 22: 44-45. It was moved that "M Hunting request D Crosby to prepare a statement to show cents as well as dollars for tabling at the A.G.M. if appropriate".

(Faithfull/Carwardine).

3. Nominations for the A.G.M. were as follows

President:	R Field
Vice Presidents:	P Kelly
	I Faithfull
Secretary:	No nomination
Treasurer:	D Crosby
Public Officer:	D Crosby
Editor:	M Malpatil
Excursion Secretary:	P Carwardine

Council:	J Burns
	K Dunn
	I Faithfull
	T New
	B Vardy
	K Walker
	G Krake

(Moved Walker/Carwardine).

The meeting closed at 9.05 p.m.

PLEASE NOTE:

A few members are still not financial for 1991. If your magazine has a **RED STICKER** on the cover please pay as soon as possible or your membership will cease.

ANNUAL REPORTS OF SUB-COMMITTEES FOR THE YEAR ENDED
31 DECEMBER 1990

ENTRECS Sub-committee

This sub committee is composed of D.F. Crosby [Chairman], J. [Joy] Burns, K.L. Dunn and M.M. Hunting. Apart from informal discussions, the sub-committee met once during the year to discuss the plan for the second edition of the distribution maps of Victorian butterflies. The decisions of that meeting were reported in the October 1990 *Victorian Entomologist* (20: 94-96) and accepted by Council. It was hoped that a draft of the second edition of maps would be available by mid 1991, with D.F. Crosby doing the preparatory work. The proposed lay-out was accepted by council. After the available data were mapped, further records would be solicited from members.

D.F. Crosby: Chairman

Conservation Sub-committee

This sub-committee is composed of T.R. New [Chairman], K.L. Walker, D.F. Crosby and M.F. Braby. No full meeting was held during the year but a number of informal discussions were held, mainly relating to the conservation of several butterflies in Victoria.

D.F. Crosby (for T.R. New, Chairman)

EDITORIAL

It has been an enjoyable task editing the *Victorian Entomologist* over the last financial year. It has proved particularly rewarding to see the recent increase in membership, from about 90 to about 140, during this period and also the receiving of encouragement from various members and the essential support of the regular authors which has made the continuation of this magazine possible. It is great to see contributions by new authors and the younger members. I hope this support continues for the next editor and to ensure the continuation of the *Vic. Ent.* as a channel for amateur entomologists to publish their observations and field notes is maintained as it has been in the past. I, personally, am unable to continue in this service, but I would like to take this opportunity to present my thanks to those that have supported this task: to David Crosby, Ian Faithfull and Mali Malipatil for assisting with the sticking in of the reproduced photographs and help with other miscellaneous tasks, usually on short notice; to Ken Walker and Tim New for helpful advice, and also the Typing Staff IPS for placing the contributions on disk which saved me a lot of time and effort. Finally thanks to Bob Fisher for his recent assistance with regular items for the 'Grapevine' column.

Kelvyn Dunn

SOFTWARE REVIEW:

"European Butterfly Identifier" Version 1.0, G. Thomson, ID Software, 1/2 Ravenhill, Lochmaben, Lockerbie, Dumfriesshire, DG11 1QZ [telephone 0387 811474].

This software review is based on the demonstration version 1.0, supplied for this purpose. The version examined incorporated only the Family Pieridae (whites and yellows). It is assumed that the remainder of the package is very similar.

The "European Butterfly Identifier" software package contains a disclaimer that the package is not intended to identify every European butterfly with 100% certainty; it will not produce "pretty" pictures of butterflies on the screen, nor is it intended to replace the text books and guides to European butterflies. In this regard, reference to the standard or recommended works on particular regions is provided where appropriate.

The package will run on any IBM or similarly compatible PC with MS-DOS 3.0 or higher, and requires 512 K of spare memory. The software loads by typing simple commands which are printed on the disk. The full version is normally supplied on two 360 K [5 25 inch] disks but the demonstration version is on a single disk. Reading from floppy disk is slow, creating delays between questions, but once installed on hard disk the process became instantaneous. The number of keys used in the package is few to presumably simplify the general use of the system. The package is very cheap [£39.95 - single user license; special prices for educational establishments and multiuser licenses] for a program of limited demand with due respect to the programming involved and other features provided.

A computerized dicotymous key to European butterflies is certainly a welcome addition to the voluminous literature and associated work already available on the European species. The software includes detailed text on the use of dicotymous keys and other general information for the uninitiated, most of which can be found in the standard butterfly texts.

Coverage includes 392 species from Europe including Madeira and the Canary Islands. It provides the technical species names with the authority as well as the common names [in English]. For each species general information is presented and this summary data includes a distribution map presenting the generalized distribution within the European confines. It allows the identification of butterflies species from Family level [in Demo version] or beyond; provides details on close species to aid further separation when in difficulty and also lists all species names in full, with year of description and accompanying common name if desired. Keying a species name where appropriate will present the summary information. One must key in a specific epithet but keying a genus did not successfully list any species, nor misspelled names [no possible selections were suggested, nor does the system interpret and correct/suggest the proper spelling], nor would it accept common names in part [eg "Small" instead of "Small White"]. This means that one must be familiar with the names or otherwise have difficulty being able to obtain the information desired.

The font used appears to be created graphically and some letters are not easy to read quickly, however the white writing on blue is a good choice and the menu choices are self explanatory. The butterfly shaped cursor is novel and appropriate. The help menu is also self explanatory. Menu selection and general presentation is neat but unsophisticated. An attractive butterfly mural appears on entering the software. Help menu provides concise instructions on the interpretation of the dicotymous key descriptions including wing terminology and general abbreviations for terms used in the keys - rather than providing help in the use of the software itself - an all too welcome improvement over

other commercial packages. It does not seem possible, however, to obtain the help menu in the comparison of close species file and in this area improvement may be needed. The use of much abbreviation in the key alternatives is questioned; it makes reading difficult and may deter some users.

Despite these objections, the system proved very simple to use. I consider the help menu, of which there are six screens, could be more usefully accessed through six separate function keys to avoid tracking through each page to re-examine the diagrammatic wing venation key and associated jargon appropriate to the wing regions. The terminology used is similar to that used by D'Abrera in his butterfly monographs and thus not the same as that used in Common & Waterhouse (1981), the text most familiar to Australian butterfly enthusiasts.

As one progresses through the key the selections are recorded in an adjacent window for later checking. I believe some key descriptions are difficult to determine for the novice. Confusion can result for some users over the position of the regions of the wing on the actual specimen and the relationship to the veins. More experienced butterfly specialist would experience no trouble identifying material accurately and rapidly. In this regard I tried a number of European species with success. The key characters operate on a process of elimination rather than following taxonomic characters and so use is restricted to the European species. For curiosity sake, an Australian summer form female of *Catopsilia pomona* keyed to the African counterpart, *Catopsilia florella* and I was impressed by this success to genus, but other seasonal forms of *C. pomona* did not result in a similar success.

My main criticism is with the key selections. Some of the technical descriptions may prove a 'stumbling block' for the novice or student, for example, although the apex of the wing is figured and labelled, the adjective "apical" is not defined and is assumed in the users' vocabulary; in this regard the package is not suitable for Secondary School level without teacher assistance but would prove a useful addition to the Zoology Laboratory in undergraduate entomology courses in Europe where the software is relevant. As an ex-Secondary Biology teacher I consider that with an accompanying set of European butterflies the program would be a useful teacher demonstration for year 10 general science, or an addition to the practical class session in the use of dicotymous keys in the present Year 11 Biology course curriculum in Australia.

Many descriptions in the keys involve qualitative characters which are difficult to judge by the novice or those in Australia where the range of variation in a Family may be quite different from that of the local fauna. Thus "pointed forewings" can be ambiguous of that of *Leptosis* and *Appias* species in the Australian region. In addition, some users may compare forewings with the hindwing and consider those in *P. rapae* to be "pointed" in comparison. Furthermore, one key criteria was "alpine" or "Arctic" and this habitat selection requires some label data information and knowledge of local geography. Color fading in old specimens may also hamper identification.

Of minor interest was the distribution of *P. rapae*. Temperate Asia and Japan were listed but Australia and New Zealand were omitted!

I recommend this program to serious collectors of European butterflies in Australia, and if marketed in this Nation with an accompanying selection of European butterflies, it would prove a valuable kit for High School Biology classes.

Kelvyn Dunn, Institute of Plant Sciences, Department of Agriculture, Burnley Vic.

THE GARDEN ADVISORY SERVICE - Its Role in Serving the Community

Peter Evans

G.A.S. Department of Agriculture, Swan Street, Burnley Vic. 3121

The Garden Advisory Service (G.A.S.), receives daily requests for identification and control of garden and household insects.

On occasions officers of the Garden Advisory Service are the first to be informed of a new occurrence of an insect pest in Victoria. Recently, for example, the Citrus Gall wasp in Coburg and the Elm Leaf Beetle on the Mornington Peninsula.

Seasonal occurrences of insect pests in various parts of the State are made obvious by the number of calls about certain insects at particular times of the year. These include for example, Bogong moths, armyworms, caterpillars, green grocer cicadas, mosquitoes, green bottle flies, and garden spiders especially the white-tailed spider after the publicity some time back, but more often redbacks and Melbourne trap-doors. In addition to requests for information by the public, extensive use of the Garden Advisory Service is made by country officers of the Department of Agriculture and Council Health officers. Queries are referred to us from pest control operators, CSIRO and other Government departments.

The most common general queries concern household ants, fleas, miscellaneous spiders, wasps, German cockroaches, thrips, whitefly and scale insects. Seasonal requests for information cover harlequin bugs, grasshoppers, crickets, steel blue sawfly larvae, scorpions, snails, Bogong moths, Portuguese millipedes and garden weevils, and certain weather conditions at particular times, such as heavy rains will generate calls about amphipods, leopard slugs and springtails. The new flush of spring growth of plants will stimulate enquires about aphids and aphid control. Indoor plants have their own unique problems and are more commonly infested with scale insects, mealy bugs or mites.

Two insects that appear to be becoming more frequent in occurrence are the Chinese wax scale, particularly on citrus trees, and the psocids, especially the booklouse in homes and stored food products.

Sometimes uncommon insects are brought in for identification. These specimens if in suitable condition are placed in appropriate institutions such as the Victorian Agricultural Insect and Arachnid Collection at the Institute of Plant Sciences (IPS), or with the Museum of Victoria. Beetles being the most diverse insect group will usually have one or two rarely seen garden species brought in for examination each season. Sometimes unusual or rare flies, wasps, spiders, native bees, caterpillars, worms, snails and bugs are posted in for identification and further information. Such organisms when poorly packaged frequently arrive in an unsatisfactory condition, and examining putrefying and fermented spiders can be quite unpleasant. Others arrive missing various appendages such as legs, antennae, palpi or wings. They may even arrive totally squashed making identification impossible. Unfortunately many are sent without accompanying details which can make answering their queries difficult.

The Garden Advisory Service liaises with agricultural entomologists for information concerning control of pests and insect taxonomists at IPS, Department of Agriculture and staff of the Museum of Victoria for some specific determinations.

CALL FOR NOMINATIONS:- J.C. 'ZOO' LE SOUEF MEMORIAL AWARD

The Society invites nominations which are made annually for this Award and may be made by any individual or body, and should contain sufficient information for the Awards Committee to appraise the contribution made by the nominee. The award recognizes the very substantial role played by amateurs in the development of knowledge of our insect fauna.

Nominations should include:

- a) Name and full postal address of both nominee and nominator.
- b) Clear statement of grounds on which the nomination is being made. This should include (i) period over which the contribution has been made; (ii) details of the contribution, lists of publications; (iii) comments on allied activities such as involvement in naturalist or related groups, and help to other entomologists, collections made (etc.) and (iv) declaration that these activities have been made in an amateur capacity. Copies of publications (on loan) would be useful.
- c) Brief resume/curriculum vitae of the candidate.

Submit to Dr Tim New

Honorary Secretary,
Entomological Society of Victoria
Department of Zoology, La Trobe University,
BUNDOORA Vic. 3083

Nominations must reach T. New by 1 November 1991

**A NOTE ON TROGODENDRON FASCICULATUM SCHREIBERS
(COLEOPTERA: CLERIDAE)**

Trevor J. Hawkeswood
49 Venner Road, Annerley, Brisbane, Queensland 4103

Abstract: Some previously published biological notes on the large clerid beetle *Trogodendron fasciculatum* Schreibers (Coleoptera: Cleridae) are reviewed. A collection of an adult from the dead, dry wood of *Eucalyptus propinqua* Deane et Maiden (Myrtaceae) at Toowoomba, south-eastern Queensland is reviewed.

The Cleridae of Australia are represented by about 300 described species, but little has been recorded on the biology of the various species, many of which may now be uncommon or rare as a result of human changes to the natural environment. A number of Cleridae are common on the flowers of *Angophora* and *Eucalyptus* (both Myrtaceae) but little is known of species that are obligate carnivores in the adult stage. One of the largest Australian species is *Trogodendron fasciculatum* Schreibers which occurs in eastern Australia (Britton 1970: 379). The adult beetle is variable in size and has a distinctive colour pattern and sculpture:- the general body colour is black, the antennae are yellow and the elytra are very coarsely punctate in the upper half as well as on the apex, while in the median region of the elytra, there is a very finely punctate, velvety-black area margined with pale grey pubescence; at the base of the elytra in the humeral area, there are two dense brush-like patches of hairs. These bunches or fascicles of hairs are an unusual feature and have given rise to the scientific epithet of *fasciculatum*.

Adults are reported to be found swarming on tree trunks in hot sunshine (McKeown 1942: 130; Britton 1970: 579) and when moving about in this situation the bright yellow antennae are constantly and rapidly moved in a wasp-like manner (*i.e.* in a very agitated fashion) so that the appearance of the beetle resembles certain *Sphex* wasps (Sphecidae: Hymenoptera) (McKeown 1942: 130). McKeown further noted that if the beetle is carelessly handled, it will bite fiercely, sinking its jaws into the flesh of the fingers or palm so tightly that it will often allow the head to be pulled off rather than release its grip! The females apparently lay eggs in the crevices of bark and upon hatching, the larvae work their way into the tunnels of the large wood-boring beetles;

the large longicorn beetle *Phoracantha recurva* Newman (Cerambycidae) suffers considerably from the attacks of the *Trogodendron* larvae which prey upon the longicorn larvae in their tunnels (McKeown 1942: 130).

During December 1976, I observed one small specimen of this beetle on the flowers and foliage of *Leptospermum flavescens* Sm. (Myrtaceae) in the lower Blue Mountains, New South Wales, (Hawkeswood, 1978: 271), I did not have time to study the behaviour of the species in detail but it is possible that the beetle was predated upon other small insects attracted to the nectar of the *Leptospermum* flowers. The specimen was not collected.

On 7 December 1986, I dissected part of a dead, fallen log of *Eucalyptus propinqua* Deane et Maiden (Myrtaceae) on a property near Toowoomba, south-eastern Queensland. Part of the log was semi-rotten and moist inside. A number of beetles from various families were dissected from the dead wood, including one adult specimen of *T. fasciculatum*. The specimen measured as follows: total body length 16.5 mm, elytral length 11.0 mm, elytral width at the widest point 5.4 mm; the beetle is in the collection of the author. The beetle became very active once it was exposed to the direct sunlight and attempted to escape by active movements and by attempting to bite so it was promptly deposited in a collecting bottle. In over 20 years of collecting beetles in eastern and western Australia, this was only the second time that I had come across this beetle in the field. Its habit of running over logs in hot sunshine as noted by McKeown (1942) and Britton (1970) has not been substantiated by recent first-hand observations. I regard it as a rare species which is of considerable interest because of its apparent mimicry of spicid wasps and the presence of the curious tufts of hairs on the elytra, the function of which is apparently unknown.

References

- Britton, E.B. 1970. Chapter 30. In: *The Insects of Australia*. CSIRO, Melbourne.
- Hawkeswood, T.J. 1978. Observations on some Buprestidae (Coleoptera) from the Blue Mountains, N.S.W. *Australian Zoologist* 19: 257-275.
- McKeown, K.C. 1942. *Australian Insects*. Sydney, Royal Zoological Society of New South Wales.

NEW DISTRIBUTION RECORDS FOR BUTTERFLIES IN NEW SOUTH WALES.

C.J. Muller

P.O. Box 228, Dural, NSW 2158

Abstract: New distribution records are given for *Anisynta cynone gunneda* Couchman, *Hesperilla donnyssa samos* Waterhouse, *Hesperilla crypsargyra hopsoni* Waterhouse, *Telicota colon argeus* (Plötz), *Hypocysta metirius* Butler, *Heteronympha penelope penelope* Waterhouse, *Hypochrysops cyane* (Waterhouse and Lyell) and *Hypochrysops byzos byzos* (Boisduval), from New South Wales.

Introduction

Nomenclature follows that of Common and Waterhouse (1981). Material is in the collections of Russell Mayo, Les Ring and the author.

Hesperiidae

Anisynta cynone gunneda Couchman

Many adults were collected near Somerton on 28 and 29 March 1989. This record extends the known distribution about 40 km eastwards at this latitude.

Hesperilla donnyssa samos Waterhouse

Larvae and exuviae were found on *Gahnia aspera* (R.Br.) Spreng near Rylstone in January 1991. A dead pupa also discovered is identical to those from various localities in the Blue Mountains. This is an additional locality for this subspecies in inland New South Wales.

Hesperilla crypsargyra hopsoni Waterhouse

A few specimens were collected at Mount Allyn, south of Barrington Tops, in January 1991. This is a new southern limit for this subspecies.

Telicota colon argeus (Plötz)

One male was collected in a garden at Wollongong on 15 January 1988. This is a new southern limit for this subspecies; the previous southernmost record was Sydney (Common & Waterhouse 1981).

Nymphalidae

Hypocysta metirius Butler

Two males and a female were collected a few kilometres north of Eden during October and January 1990, respectively. Common & Waterhouse (1981) did not specify the exact southern limit for this species in NSW but these records provide a definite southern locality.

Heteronympha penelope penelope Waterhouse

Several specimens have been collected at Brown Mountain during January since 1988 and also on 3 March 1991. This locality record extends the known range east from Thredbo (Dunn and Aston 1986). Dunn and Aston (1986) provided evidence of a continuous distribution south from Thredbo through to subspecies *sterope* Waterhouse in far eastern Victoria.

Lycaenidae

Hypochrysops cyane (Waterhouse and Lyell)

A single male was collected hilltopping at Gosford on 1 December 1989 in company of *H. ignitus ignitus* (Leach) and *H. delicia delicia* Hewitson. This is an additional locality for this rare species on the central coast.

Hypochrysops byzos byzos (Boisduval)

A few adults were collected in January 1988 and 1990 and several adults reared from larvae collected in late September 1990 at Pambula Beach. This is a new southern limit for this subspecies, extending the distribution south from Tathra (Common & Waterhouse 1981).

References

- Common, I.F.B. and D.F. Waterhouse 1981. *Butterflies of Australia*. Angus and Robertson, Sydney. 682pp.
- Dunn, K.L. and C.E. Aston 1986. Some notes on butterflies from south-eastern Australia. *Victorian Naturalist* 103(4): 119-121.

**A NEW HOST PLANT RECORD FOR THE FIERY JEWEL BUTTERFLY
HYPOCHRYSOPS IGNITUS IGNITUS (LEACH)**

R H Fisher

Honorary Associate, South Australian Museum, Adelaide SA 5000

On a brief visit to Yorke Peninsula, South Australia, in mid March adults of *Hypochrysops ignitus ignitus* (Leach) were noticed flying over low herbage in the vicinity of a salt lake in the Innes National Park. Close searching revealed eggs of this butterfly laid near the ground on the main stems of *Dodonaea humilis* Endl. (Sapindaceae). Small brown ants (*Iridomyrmex* sp.) seemed attracted to the eggs, and larvae in about the third instar were found in the ant nest just below the surface. There was no obvious ant-byre around the stem of the plant as has been observed with other host plants. *D. humilis*, commonly known as the 'dwarf hop-bush', is a dioecious spreading shrub up to 1m high.

Common & Waterhouse (1981) included three *Dodonaea* spp., viz. *D. triquetra*, *D. lanceolata* and *D. attenuata* in their list of host plants for this butterfly in eastern Australia, while Fisher (1978) recorded *Acacia pycnantha* and *Choretrum glomeratum* in South Australia.

Acknowledgements

I am grateful to the State Herbarium, Botanic Gardens, Adelaide for botanical identification, and to Mr Archie McArthur for confirmation of the ant genus. Field work was carried out with the assistance of a research grant from the Friends of the South Australian Museum.

References

- Common, I. F. B. and D.F. Waterhouse 1981. *Butterflies of Australia*. Revised edition. Angus & Robertson, Sydney.
- Fisher, R. H. 1978. *Butterflies of South Australia*. S.Aust. Government Printer, Adelaide.

NOTES ON THE BIOLOGY AND HOST PLANTS OF *THEVETRA LATREILLEI* (MACLEAY) (LEPIDOPTERA: SPHINGIDAE)

Trevor J Hawkeswood

49 Venner Road, Annerley, Brisbane, Queensland, 4103

Abstract: In subtropical coastal Queensland and New South Wales, the larvae of the pale grey-brown hawk moth, *Thevetra latreillei latreillei* (Macleay) (Lepidoptera: Sphingidae) feed on the foliage and stems of the introduced balsam, *Impatiens balsamina* L. and will also accept leaves and stems of the related *I. wallerana* (Hook.f.) Sultan (Balsaminaceae) and the native wild grape, *Cayratia clematidea* (F. Muell.) Domin (Vitaceae). Some aspects of the development of the last instar larva into the pupa and adult have been studied by the author over the past 5 years - the pupal duration is 14-16 days and the pupa may also undergo winter diapause although data is limited on this phenomenon. Other biological data are provided such as observations on shelter construction by the larva and larval behaviour.

Introduction

Little has been published on the biology and duration of the life-stages of Australian hawk moths (Sphingidae). There have been very few papers published on Australian hawk moth biology over the past 30 years, the most significant being Manski (1960), Common (1963), Dowling & Haines (1963), Rose (1975) and Moulds (1981, 1984), all of which deal only with food plant records of the larvae.

The following observations have been made by the author since 1985, and although limited, may be of interest and use to present and future workers on this species of moth.

Observations

(a) In the Brisbane area, south-eastern Queensland.

On 6 February 1985, one 75 mm long larva ['green form'] of *T. l. latreillei* was found on a leafy branch of a small balsam plant, *Impatiens balsaminea* L. (Balsaminaceae) growing in a residential garden at Brisbane, south-eastern Queensland. The larva had fed extensively on the stems, petioles and leaf blades of the lower leaves of the food plant and was moving upwards towards fresh, younger leaves. The larva was collected and later placed in a plastic bag with a

large branch of an alternative larval food plant, snap weed, *Impatiens wallerana* (Hook. f) Sultan (= *I. sultanii* Hook.), growing in my mother's garden. The plastic bag was kept indoors at 25°-27°C. Feeding continued until the following day. The feeding rate of the larva was such that a 7 mm long and 6 mm wide faecal pellet was extruded every 20-30 minutes. Feeding occurred during both day and night. On a few occasions, when alarmed, the larva reared back with the head and legs retracted, the front part of the body stiff and erect and the eyespots expanded in typical hawk moth posture. However, most of the time, the larva merely clung tenaciously to the stem when touched or disturbed and failed to display any defensive behaviour. On the night of 8 February, two days after collection, the larva constructed a crude shelter by attaching several withered leaves together with silk at the end of the branch. Normally, hawk moth larvae migrate to the soil and pupate there. As the larva pupated, a considerable amount of colorless, viscous fluid was extruded. Pupation was completed by the following morning, 9 February. The pupa measured 52.6 mm long and 12.5 mm wide at the widest point. The adult emerged during the night of 22 February; the pupal stage lasted 14 days.

One 'brown form' larva of *T. latreillei* was found feeding on leaves of *Cayratia clematidea* (F. Muell.) Domin (Vitaceae) at the University of Queensland campus, St. Lucia, Queensland on 18 April 1985. It pupated on 20 April and the resulting pupa measured 47.4 mm long and 11.2 mm wide at the widest point. The temperature in my 'laboratory' was 20°-25°C. After one month, the pupa was examined and it displayed abdominal movement when touched, indicating that it was still alive and healthy. The pupa was checked every 2 or 3 days for movement until 28 July 1985 when no movement was detected for the first time. During the following week, the pupa changed to a paler brown and became brittle. I assumed the new adult was ready to emerge. However, this did not occur, and consequently, after another 2 weeks, the pupal case was broken and examined. The pupa was dead, severely decayed, presumably through viral and/or bacterial attack since there was no evidence of Hymenopterous or Dipterous parasitoids. Even though the emergence of the adult was aborted, it appears that the pupa, which lives for 101 days, may have entered a winter diapause as a result of late pupation in April at the beginning of autumn when temperatures are declining.

(b) In north-eastern New South Wales

On 11 March 1991, another 'green form' last instar larva was collected from a plant of *I. wallerana* growing in a residential garden at Hastings Point, north-eastern New South Wales (28°20'S, 153°35'E). The larva was very lethargic at first but wriggled vigorously, in a corkscrew-like fashion, when handled. The larva was placed in a container with adequate food plant material. During the following night the larva pupated, after constructing a crude shelter from the remains of unchewed stems and leaves of the host plant, which were held together with a few strands of silk. The adult emerged on 28 March 1989; the pupal stage took 16 days.

Comments

The three food plants listed for *T. l. latreillei* in this paper have been recorded previously by Moulds (1981). *Impatiens* are commonly grown, introduced, somewhat succulent shrubs in residential gardens in tropical and subtropical coastal Australia where they were quick growing even in the poorest of soils. Despite constant but opportunistic searching in residential gardens in the Brisbane area and elsewhere over the last 5 years, I have encountered only three larvae of this hawk moth and in each case, only one larva each was obtained from the three garden populations of the host plants, *I. balsamina* and *I. wallerana*. In all three cases, damage to the host plants was not extensive but some branches had been almost defoliated with the branch tips also eaten away. In addition, only one or two plants were effected, indicating that all damage was done by the single larva in each case. The somewhat dispersed populations of *Impatiens* in the residential areas of Brisbane and the coast to the south where I have collected the larvae may account for the apparent scarceness of the moth in these areas. The native food plant is *Cayratia*, a genus of scrambling vines with deeply dissected leaves which commonly grow on the margin of rainforests in cleared or disturbed areas. *Cayratia* is not as popularly grown in residential gardens as *Impatiens*, but is more common in native habitats so it is probable that the moth is more common there than in residential areas as well.

In nature, *T. l. latreillei* may be able to over-winter successfully as a pupa but the longer it remains in this stage it probably increases its risk of infection from soil-borne pathogens. The pupal stage appears to last at least 14-16 days during summer.

Acknowledgment

Thanks are expressed to Mr M O'Reilly for providing the larval specimen from Hastings Point.

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OBSERVATIONS OF THE MICRO-HABITAT OF A SPECIMEN OF
PHEROPSOPHUS VERTICALIS DEJEAN
(COLEOPTERA: CARABIDAE: BRACHININAE)

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In over ten years of collecting in the Adelaide area, I have only once encountered a specimen of *Pheropsophus verticalis*, the 'bombardier beetle'. This was on August 30th, 1990. The locality consisted of low rocky hills, with little undergrowth or tree cover, in the Adelaide coastal suburb of Hallett Cove, south of the city centre. The hills are bordered on three sides by houses and by the sea on the north. The land is used for sheep grazing, and is part of the 'dry sclerophyll' life zone of South Australia.

The specimen of *P. verticalis* was found under a loose, flat stone approximately 20 x 30 cm and approximately 3 cm in thickness. The stone lay within three metres of running water, at a slope of about 60 degrees and 30 cm or so above the level of the water. It seemed safe from flooding.

Upon lifting the stone I noticed an elaborate series of tunnels which covered about 60% of the area underneath. The tunnels were highly interlaced and free of debris, the soil being quite tightly packed.

I caught a glimpse of the beetle as it disappeared into the tunnels. It had been at rest in a central position and a few centimetres away I noticed another large black carabid. This was a *Secatophus australis* (Carabidae : Pterostichinae). Apart from a few slaters there were no other insects or animals present. There was therefore no clear indication as to what had constructed the tunnels. According to Matthews (1980) *Pheropsophus verticalis* may prey on and parasitise mole-cricket eggs (Orthoptera : Gryllotalpidae). If this is the case, the tunnels may have been a mole-cricket burrow but this is by no means certain.

The soil was dark brown in colour with a uniform, moist but firm consistency, like that of potter's clay. Digging through it, I noticed it was relatively free of small stones, roots or other material. After digging down to a depth of about 20 cm the *P. verticalis* was unearthed. It sought cover in the loose soil and when it had again buried itself I heard a loud "pop" and noticed a cloud of white vapour appear out of the soil. This was the beetle employing its chemical defense mechanism. I was interested to see that it had done so while buried. The discharge being strong enough to travel through the loose soil, it quickly dissipated into the air. I caught the beetle and placed it in a jar for transport. It made no further use of its defense mechanism while in captivity.

I invite others to write to me concerning their experience with this beetle.

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**SOME NOTES ON NATIVE BEES (*CHALICODOMA*: MEGACHILIDAE;
HYMENOPTERA) VISITING FLOWERS OF *CALYTRIX FRASERI* A. CUNN.
(MYRTACEAE) IN WESTERN AUSTRALIA**

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Abstract: Some brief observations are provided on two species of Australian native bees (*Chalicodoma* spp., Megachilidae) visiting the open flowers of *Calytrix fraseri* A. Cunn. (Myrtaceae) in Western Australia during 1980. These bees are apparently the main vectors of pollen of this plant in the areas studied. However, the flowers of *C. fraseri* possess more features of typically butterfly-pollinated blossoms (phycophilous flowers) than bee-pollinated blossoms (melittophilous flowers). There is only one published record of a butterfly feeding from the flowers of *C. fraseri* and it would appear likely that bees are more important pollen vectors of this plant in the drier marginal areas of Western Australia.

Introduction

During 1979-80 I made a number of observations on insect/plant relationships in various areas of Western Australia (Hawkeswood 1980a, 1980b, 1982, 1987, 1989). Further observations on native bees and flowers are presented here for the first time.

Observations

On 17 February 1980, two species of native bees from the genus *Chalicodoma* (*Hackeriapis*) (Hymenoptera: Megachilidae), were observed visiting the open flowers of *Calytrix fraseri* A. Cunn. (Myrtaceae), about 16 km east of Mogumber (31°00'S, 115°54'E) in the south-west of Western Australia (1235-1255 hrs, temperature c. 30 C). The same two bee species were more common at this site than near Mogumber on 17 February. *Calytrix fraseri* was the only species in flower apart from a few plants of *Jacksonia stembergiana* Hueg. (Fabaceae), which were apparently not visited by the bees. The vegetation and climatic conditions were similar to those experienced at the Mogumber region a month earlier. No other insects were observed feeding from the *C. fraseri* flowers and no butterflies were observed in the area.

Discussion

The genus *Calytrix* contains about 45 species of shrubs endemic to Australia, with the

majority occurring throughout Western Australia. The flowers are sessile in the axils of the upper leaves and the petals are fused into a corolla-tube with five, prominent lobes at the apex, each produced into a fine awn. The corolla-tubes may be white, or various shades of pink, yellow, blue or mauve, depending on the species. *Calytrix fraseri* is one of the better known species, being widespread in sandy heathlands and woodlands in the south-west of Western Australia. The flowers are bright pink, about 8-10 mm in diameter at the corolla-tube mouth, with numerous stamens of various lengths prominently exerted at the top of the flower.

Morcombe (1968: 55-56) claimed that *Calytrix fraseri* is pollinated by butterflies. He illustrated the Lesser Wanderer, *Danaus chrysippus petilla* (Stoll)(Nymphalidae) on a flower of *C. fraseri* and stated: "The pink *Calytrix fraseri* flowers shown here have a brush of pollen-tipped filaments radiating from the small opening of the deep nectary. The insect's head must brush among the pollen when its long proboscis probes for nectar. The depth of the flower tube, from the brush of filaments to the nectar source is equal to the length of the butterfly's tongue". Morcombe did not state anything about the position of the style and whether butterflies are able to transfer pollen from their bodies to the stigma. Morcombe also failed to state that the style of *C. fraseri* is very slender and protrudes above the stamens and hence flowers may be pollinated by other insects landing on the platform of "petals" (actually the corolla-lobes). Therefore, since the style is exposed, pollination is not necessarily restricted to butterflies, although in *Calytrix*, butterflies (and very long-tongued bees) are probably the only insects able to place their proboscis (or tongue in the case of bees), down into the narrow corolla-tube to seek any secretions produced by the nectaries.

Scientists studying pollination biology may classify plants or groups of plants on the basis of their method of pollination, i.e. either by wind, birds, mammals, insects etc. The type of pollination is usually strongly correlated with flower structure and morphology. One of the best classifications is that by Faegri & Van der Pijl (1976). According to these authors' criteria, *C. fraseri* possesses the syndrome of psychophily (butterfly-pollinated blossoms). Plants conforming to this pollination type have flowers which are narrow and continually open, have a weak odour, are vividly coloured (often red) with nectar well hidden in the corolla-tube and an indefinite number of anthers

placed above the level of the other floral parts on long filaments. On the other hand, typical bee-pollinated plants (melittophily, occurring in such families as the Fabaceae, Orchidaceae and Scrophulariaceae) are brightly coloured, irregular in shape, possess nectar guides, have a fresh but weak odour and hidden nectar and have few stamens and concealed anthers and stigmas. Although the flowers which are brightly coloured, with a weak odour and hidden nectar, *C. fraseri* does not possess other main structural features of melittophily such as concealed stamens and style. However, the flower does not exclude bees from gathering pollen nor prevent them from coming in contact with the anthers and stigmatic surfaces during their pollen-collecting forays.

It is generally known that Western Australia is not as well endowed with butterfly species as are other parts of Australia. From a perusal of Common & Waterhouse (1981), it can be shown that only 28 butterfly species are likely to occur in the Mogumber-Gingin area, but only a few of these are common or widespread in Western Australia. Most of these 28 species are coastal in distribution (with isolated populations) or are found in the more inland areas of south-west Western Australia (eg. the Stirling Range). The most likely butterfly visitor to *C. fraseri* in the Mogumber-Gingin area are the Lesser Wanderer *Danaus chrysippus petilia* (Stoll), the Painted Lady *Vanessa kershawi* (McCoy), the Meadow Argus *Precis villida calybe* (Butler) (all Nymphalidae), and the Blotched Blue *Candalides acastus* (Cox) (Lycaenidae), four species which are usually common in various areas of eastern Australia but are usually sporadic and not as common in Western Australia. In many areas of south-west Western Australia, especially in drier localities, native bees are probably more important in the pollination of *Calytrix* than butterflies, since they are usually more abundant and more efficient as pollination vectors. *Calytrix fraseri* and other members of this genus should provide ample opportunities for further investigations into insect/plant relationships.

Acknowledgements

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RECENT ARTICLES OF INTEREST

R.D. Barker & W.J.M. Vestjens, *The Food of Australian Birds Vol.1 Non-Passerines*. CSIRO, No date (1990), 480 pp., \$57. Stomach contents are listed for larger non-perching Aust. birds collected 1963-1980 by CSIRO Div. Wildlife Res., together with results of lit. search to 1980. WV identified the invertebrates, usually to family but often to gen. & sometimes sp. level, e.g. emus have eaten grasshoppers, crickets, ants, ladybirds & the moths *Neocleptia punctilifera*, *Agrotis spina* & *Heliothis obsoleta*. Unfortunately entos must consult each individual bird listing to gain a useful idea of the identified predators of particular insects.

Pamela Gilbert & Chris J. Hamilton, *Entomology: A Guide to Information Sources*. 2nd Ed., Mansell, 1990, 24x16 cm, 272 pp, 30 pounds U.K. + 10% surface post. Naming & id of insects, id services, common names, glossaries, lab. cultures, collections, ento. supplies, photography & illustration sources, journals, monographs, books, secondary journals, theses, databases, libraries, newsletters, conferences, societies, obituaries, translations, etc.

D.F. Crosby, *A Management Plan for the Altona Skipper Butterfly *Hesperilla flavescens* *flavescens* Waterhouse (Lepidoptera : Hesperidae)*. Arthur Rylah Institute for Environmental Research Technical Report Series No.98, Dept.Cons.& Env.,Vic, May 1990, 65pp., 23 photos, 8 maps. Very detailed examination of the species in Vic, 18 new localities. Results of popul. counts. Life history & causes of popul.decline. Fire, changed hydrology & weed infestation main threats. Cherry Lake & Truganina Swamp should be reference populs. & managed accordingly. Management directives for all sites.

ABC Radio National, *Australian Ants. Earthworm (programme)*, 27 Feb. 1991. Bede Lowry, Alan Anderson, John Majer, John Greenslade, Bob Taylor *et al.* interviewed. Extraordinary diversity & ecological import. of Aust. fauna. Thrills of studying ants, indicator species, rarities, *Nothomyrmecia* habits & behav., metapleural gland antibiotics produced by *Myrmecia*.

Graeme O'Neill, **CSIRO enlists a 'friendly' fungus in the fight against termites**, *The Age*, 1 June 1990, p.5. 80 cultures of the termite parasite fungus *Metarhizium anisopliae* have been isolated from 300 nests of economically important termites. More virulent strains are to be selected to dev. a bio-control prep. to be marketed in 3-4 years & could displace organochlorines. The fungus infects through the skin, turns the termite into a near-solid mass of hyphae then produces huge quants. greenish blue psorophores outside the cuticle to reinfect by contact.

Zs. Balint, *Butterflies from Australia (Lepidoptera : Rhopalocera)*. *Folia Entomologica Hungarica* 47(1-2): 19-22, 1986. 27 common spp. collected by G Hangay, E.Herczey & A. Vojjits from Conway Range N.P., Gravel Creek (s of Rockhampton) & Camira, Qld, Kosciusko N.P. Main Refs: Waterhouse 1932 *What Butterfly Is That?* and others sim. era.

P.S. & I.M. Coupar, *Notes on skin irritation when rearing *Euproctis baliolalis* (Tussock moths)*. *Victorian Naturalist* 106(1): 26-8, 1989.

E.baliolalis gave the strongest skin reaction of over 100 spp. handled by authors. Rash & oedema caused by post-feeding final instar & cocoon but causative agent not a histamine.

RECENT ARTICLES OF INTEREST (continued)

M.F. Braby, The butterfly fauna of LaTrobe University Victoria. *Vict.Nat.* 106(4): 118-32, 1989. Seasonal occurrence & distrib. 1982-9. 28 spp, 16 resident incl. *Signeta flammeata*, *Eurema smilax*, *Geitoneura acantha*, *Heteronympha penelope*, *Polyura pyrrhus*, *Hypochrysops delicia*, *Ogyris abrota* (with *Iridomyrmex humilis* attendant ant), *O.olane*, *Jaimeus evagoras*.

G.A. Webb, Insects as potential pollinators of *Micromyrtus ciliata* (Sm.) Druce, Myrtaceae. *Vict.Nat.*106(4): 148-151. 7 Coleop., 4 Dipt., 3 Hymenopt., 1 Lepid. found on flowers at Warrumbungles, NSW. *Anaxo* (Alleculidae) & *Eleale* nr.*viridis* (Cleridae) carried largest pollen loads. Obs. of nectar feeding by the non-Coleopt.

D.F. Crosby & K.L.Dunn, The distribution and range extenalon in Victoria of the butterfly *Ocybadistes walkeri sothis* Waterhouse. *Vic.Nat.* 106(5): 184-93. Colonised rapidly mainly since mid 70s probably by natural invasion south & west from Riverina, SW from NSW south coast & probably by Introduction on Instant lawn in Melb. Detailed records of its historical distribution.

Gill Earl & Ian Lunt, Bibliography of Ecological Survey Reports, Department of Conservation, Forests & Lands, 1983 to August 1989. *Vic.Nat.* 106(5): 205-7. List of govt."pre-logging" vertebrate fauna & flora publications useful for habit descriptions, veg.lists etc. 2 for Grampians forest blocks, 1 for Acheron, the rest E.Gippsl., E.Alpine & Wonnangatta-Dargo.

Black bug to bite boneseed. *Weekly Times* 1 Nov. 1989, p.15. Planned releases of black boneseed beetle by Keith Turnbull Research Inst. to control *Chrysanthemoides monilifera*.

Cattle deaths spark recall of Insecticide. *W.T.* 15 Nov.1989, p.33. National recall of Ridlice, active ingredient chlorpyrifos, distributed by MSD-Agvet following deaths of beef & dairy cattle in NSW.

Kerri Hartland, Blowie war: its strike one. *W.T.* 25 Oct.1989, p.6. CSIRO dispatches the first of 15 tonnes of genetically engineered blowfly pupae from Canberra to Flinders Island in the first full scale field trial in what is hoped will eventually wipe out *Lucillia cuprina* in Australia.

Peter Dorrington, A bad season for sheep blowfly strike *W.T.* 15 Nov.1989, p.38; **Blowfly control shortage** *W.T.* 29 Nov, p.28. Wet, mild spring in Victoria created worst fly strike season in the decade with active ingredient of jetting control agent Vetrizin airfreighted from Switzerland due to overdemand.

Peter Dorrington, Les puts muscle into blowfly fight. *W.T.* 3 Jan.1990, p.18. 90 year old Les Bett has given \$800,000 to research on sheep blowfly & plans to leave another \$2m to CSIRO for development of genetically engineered anti-strike vaccine which would prompt sheep to produce a blowfly toxin. Profile of Mr.Bett.

Pesticides clamp. *W.T.* 3 Jan 1990, p.11. In Victoria dieldrin & lindane totally banned, aldrin & heptachlor restricted to control of subterranean termites in buildings, chlordane to termites in buildings & borers in plywood containers for quarantine purposes.

Compiled by Ian Faithfull

ON THE GRAPEVINE

In the last few months many new members have joined the Society. It is encouraging to have secondary school students join the Society; 13 year old *Mark Schutze* of Wantirna is in year 8 and joined early this year and is currently our youngest member. *Mark* is a keen collector of various insect groups and spends a great deal of his spare time familiarising himself with the metropolitan insect communities. *Mark's* main interest are the butterflies and true bugs and hopes to continue his interest in a career in entomology or related field.

It is also pleasing to receive contributions from new members especially the younger enthusiasts. This issue contains an article by 16 year old, *Chris Muller*. *Chris* joined our Society at the commencement of this year and is keen on many insect groups especially the butterflies. *Chris* has already had the privilege to observe and collect butterflies beyond Australia including parts of south-east Asia, Bougainville (PNG) and the Solomon Islands. He plans to visit Cairns, Queensland later this year and is presently busy collecting information on all the famous haunts.

Andrew Atkins is planning to visit the UK later this year and envisages spending most of his time in London, at the British Museum (Natural History) of course. With his 'World Skipper' book a high profile spare time activity, *Andrew* will be making most of his holiday examining types and photographing important specimens for his projected work. Butterfly and moth taxonomists throughout the world are undoubtedly eagerly awaiting this monumental edition.

Malu Malipatil and *Kelvyn Dunn* visited the Hattah-Kulkyne National Park during April for some light trap work and general insect and arachnid sampling in the nearby orchards and vineyards. Conditions were hot and very dry at Mildura; at the time, the Sunraysia region had suffered 76 rain free days. Most insect orders were poorly represented, the moths being the most abundant group.

Ray & Nola Manskie 'abandoned' Queensland for Easter this year to visit their daughter *Sue*, and to attend their relatives' weddings in northern-central Victoria. Whilst in Melbourne, *Ray & Nola* stayed with *David & Joyce Holmes* at Dromana. With *David & Joyce* they visited *Mary Le Souëf*, *Mary* has improved in health over the last few months and was thrilled to see them once again. As *Nola* is a keen artist, they also took pleasure in taking them both to the local art show at Rosebud. *Ray* commented to *David* that he had seen a 'Big Greasy' butterfly (*Cressida*) flying at the Golf links close by to the Melbourne 'Butterfly House'; almost certainly an escapee from this popular tourist attraction. The recent installation of video surveillance in the flight cage has perhaps served to reduce losses.

During April, *Marcus Pickett*, from near Harrowgate in the Mount Lofty Range SA, discovered a number of eggs of the spasmodic Chequered swallowtail butterfly (*Papilio demoleus*) on *Psoralea* sp. and has since been busy rearing the subsequent larvae. *Bob Fisher* was interested to note that this attractive visitor still periodically occurs close to the CBD and was reminded of the remark by G.A. Waterhouse in "What butterfly is that?" (1932) that he had once seen this butterfly in the streets of Adelaide.

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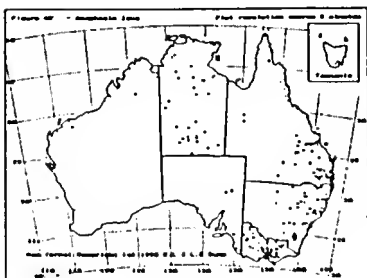
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CONTRIBUTIONS TO THE VICTORIAN ENTOMOLOGIST

The Society welcomes contributions of articles, papers or notes pertaining to any aspect of entomology for publication in this Bulletin. Contributions are not restricted to members but are invited from all who have an interest. Material submitted should be responsible and original. Statements and opinions expressed are the responsibility of the respective authors and do not necessarily reflect the policies of the Society.

Contributions may be typed on A4 paper or *preferably* sent on an IBM formatted **disk in Word Perfect** or other word processing package (clearly specified) with an enclosed hard copy print out. Urgent submissions may be faxed.

The deadline for each issue is the final Friday of each odd month.

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THE ENTOMOLOGICAL SOCIETY OF VICTORIA (Inc) MEMBERSHIP

Any person with an interest in entomology shall be eligible for Ordinary membership. Members of the Society include professional, amateur and student entomologists, all of whom receive the Society's News Bulletin, the Victorian Entomologist.

OBJECTIVES

The aims of the Society are:

- (a) to stimulate the scientific study and discussion of all aspects of entomology,
- (b) to gather, disseminate and record knowledge of all identifiable Australian insect species,
- (c) to compile a comprehensive list of all Victorian insect species,
- (d) to bring together in a congenial but scientific atmosphere all persons interested in entomology

MEETINGS

The Society's meetings are held at Clunies Ross House, National Science Centre, 191 Royal Parade, Parkville, Victoria, at 8 p.m. on the third Friday of even months, with the possible exception of the December meeting which may be held earlier. Lectures by guest speakers or members are a feature of many meetings at which there is ample opportunity for informal discussion between members with similar interests. Forums are also conducted by members on their own particular interest so that others may participate in discussions.

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Marane melanospila (Wallengr.) (Lepidoptera - Thaumetopoeidae) ranges from the Atherton Tableland northern Queensland to Victoria and Tasmania. The larvae feed on *Eucalyptus*, *Leptospermum* and *Kunzea*.